

AMENDMENTS TO THE CLAIMS

Claims 1-13 (Cancelled)

14. (Currently Amended) A process for the cryo-preservation of a primary regeneration tissue comprising the following steps:

cultivating a plant tissue on an induction medium for a time sufficient to induce a primary regeneration tissue comprising embryogenic cells;

culturing the primary regenerating tissue on a multiplication medium for a time sufficient to maintain a stable proliferation of the primary regeneration tissue;

dehydrating the primary regeneration tissue in a two step process that comprises sequentially incubation in first and second sucrose media, wherein the second medium contains a greater amount of sucrose than the first medium;

prefreezing the primary regenerating tissue to a temperature between -20°C and -40°C;
and

cryofreezing the primary regeneration tissue.

15-16. (Cancelled)

17. (Previously Amended) The process of claim 16, wherein the dehydration step involves placing the primary regeneration tissue in an air current of a laminar flow cabinet, in a stream of compressed air, or in an airtight container together with silica gel or various over-saturated salt solutions to control the relative humidity.

18-19. (Cancelled)

20. (Previously Presented) The process of claim 14, wherein the plant tissue utilized is derived from a cocoa, coffee, or carrot plant.

21. (Previously Presented) The process of claim 20, wherein the plant tissue utilized is derived from *Coffea canephora* or *Coffea arabica*.

22. (Previously Presented) The process of claim 20, wherein the plant tissue utilized is derived from *Theobroma cacao*.

23. (Previously Presented) The process of claim 20, wherein the plant tissue utilized is derived from *Daucus carota*.

24. (Previously Amended) A process for the cryo-preservation of a primary regeneration tissue comprising the steps of:

incubating a plant tissue in an induction medium for a time sufficient to induce a primary regeneration tissue comprising embryogenic cells;

dehydrating the primary regeneration tissue;

prefreezing the primary regeneration tissue to a temperature between -20°C and -40°C; and

cryofreezing the primary regeneration tissue.

25. (Previously Amended) The process of claim 24, wherein the prefreezing step comprises a two step incubation of the primary regeneration tissue, wherein the primary regeneration tissue is first incubated in a medium containing 0.4 M sucrose followed by incubating the primary regeneration tissue in a medium containing 1 M sucrose.

26. (Previously Amended) The process of claim 24, wherein the dehydration step involves placing the regeneration tissue in an air current of a laminar flow cabinet, in a stream of compressed air, or in an airtight container together with silica gel or various over-saturated salt solutions to control the relative humidity.

27. (Previously Presented) The process of claim 24, wherein the plant tissue utilized is derived from a cocoa, coffee, or carrot plant.

28. (Previously Amended) The process of claim 24, wherein the plant tissue utilized is derived from *Theobroma cacao*, *Coffea canephora* or *Coffea arabica*.

29. (Previously Amended) The process of claim 24, further comprising the step of culturing the primary regeneration tissue on a multiplication medium for a time sufficient to maintain a stable proliferation of primary regeneration tissue.

30. (Previously Presented) The process of claim 24, wherein the plant tissue utilized is derived from *Daucus carota*.

31. (Currently Amended) A process for the cryo-preservation of a primary regeneration tissue comprising the steps of:

incubating a plant tissue in an induction medium for a time sufficient to induce a primary regeneration tissue comprising embryogenic cells; and

pretreating the primary regeneration tissue by culturing the primary regeneration tissue on multiple culture media with an increased concentration of sucrose; and

cryofreezing the primary regeneration tissue.

32. (Previously Amended) The process of claim 31, further comprising the step of culturing the primary regeneration tissue on a multiplication medium for a time sufficient to maintain a stable proliferation of primary regeneration tissue.

33. (Previously Amended) The process of claim 31, further comprising the step of prefreezing the primary regeneration tissue to a temperature between -20°C and -40°C.

34. (New) The process of claim 31, wherein the step of pretreating the primary regeneration tissue comprises first incubating the primary regeneration tissue in a medium containing 0.4 M sucrose followed by incubating the primary regeneration tissue in a medium containing 1 M sucrose.

35. (New) The process of claim 31, wherein the step of pretreating the primary regeneration tissue comprises culturing the primary regeneration tissue in medium containing 0.25 M sucrose, followed by culturing on a medium containing 0.5 M sucrose, followed by culturing on a medium containing 0.75 M sucrose, which is followed by culturing the primary regeneration tissue on a medium containing 1.0 M sucrose.

36. (New) The process of claim 14, wherein the two step dehydrating process comprises first incubating the primary regeneration tissue in a medium containing 0.4 M sucrose followed by the incubation of the primary regeneration tissue in a medium containing 1 M sucrose.

37. (New) The process of claim 14, wherein the temperature of the prefreezing step is 25 °C.